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EDITORIAL COMMENT

Intracardiac thrombi: diagnostic accuracy needs to be improved!

L. H. B. Baur

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Intracardiac thrombi can occur in several disease states such as atrial fibrillation and myocardial infarction. In patients with a myocardial infarction left ventricular thrombi could be found in up to 30% of patients in the pre-thrombolytic and pre-acute angioplasty period but are now descibed in about 5% of patients in the GISSI study [1, 2]. Most of these thrombi are related to an antero-septal myocardial infarction and are located in the apex. Besides the locatization, other risk factors for mural thrombi are a reduced left ventricular ejection fraction and left ventricular aneurysm [2].

Left ventricular thrombi are associated with a high risk of systemic embolization. In some studies embolization was reported in 21% of patients [3]. Especially protruding and mobile thrombi have a high potential to embolize. Embolization may be prevented by proper anticoagulant therapy but carries the risk of fatal bleeding [4].

Two-dimensional echocardiography and trans-esophageal echocardiography are the most frequently used techniques to detect left ventricular thrombi. Unfortunately left ventricular thrombi are frequently missed by transthoracic and trans-esophageal echocardiography, especially in those patients in whom the acoustic window is not optimal. Therefore some experts recommend the use of an intravenous contrast agent to enhance detection of thrombi. In the currect issue of the International Journal of Cardiac Imaging Lipke et al. stress the value of contrast-enhanced cardiovascular magnetic resonance to detect left ventricular thrombi [5]. In 47% of the patients, where a left ventricular thrombus was seen with MR, this thrombus was missed by echocardiography. These findings are in agreement with the results of other investigators [6]. Especially small thrombi are frequently missed by echocardiography but can be detected with MRI. Because the potential benefit of oral anticoagulation in patients with a left ventricular thrombus and the potential harm in those patients without a thrombus contrast-enhanced MRI has to be used more liberal in patients after myocardial infarction. In those patients with a poor acoustic window MRI should become the first line technique for assessment of left ventricular thrombi. Although the higher costs, the paper of Lipke et al. stresses the importance of this strategy.

L. H. B. Baur (✉)
Department of Cardiology, Atrium Medical Centre Parkstad, Henri Dunantstreet 5, 6401 CX Heerlen, The Netherlands
e-mail: lhbaur@yahoo.com

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